

### **REMARKS**

This amendment is in response to the Office Action dated October 13, 2010. Claims 1 and 7 have been amended, claims 6, 9 and 12 have been canceled without prejudice or disclaimer, and no claims have been added; as such, claims 1-12 are now pending in this application. Claims 1 and 7 are independent claims. Reconsideration and allowance is requested in view of the claim amendments and the following remarks. These amendments add no new matter. Support for the amended claims can be found, for example, in paragraph [0022-0023] of the specification, as represented in US. Pub. No. 2007/0246049.

#### **I. 35 USC §§ 102(e) /103(a) Rejections**

1. Claims 1-2 and 5 have been rejected under 35 U.S.C. § 102(e) as being as being anticipated by or, in the alternative, under 103 (a) as obvious over Spearman et al. (U.S. Patent 7,331,342, hereinafter referred to as "Spearman '342"). Applicant respectfully traverses this rejection.

#### **The Final Office Action Fails to Show Spearman '342 Discloses the Inner and Outer Diameter of the Hollow Fibers**

Claim 1 recites:

*A humidifying device for humidifying a gas, with the water vapor contained in air, comprising:*  
*a hollow fiber bundle formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu$ m and an outer diameter of approximately 500  $\mu$ m, and being orientated in a direction of a predetermined axis;*  
*a housing having an accommodating space for accommodating the hollow fiber bundle therein, and having an introduction port for the gas to be humidified, communicating to bores of the hollow fibers, a discharging port for the gas to be humidified, communicating to the bores of the hollow fibers, an air inlet*

*communicating to a space in the housing external of the hollow fibers to introduce atmospheric air, and an air exit communicating to the space in the housing external of the hollow fibers; and*  
*blowing means arranged at the air inlet of the housing for introducing the atmospheric air into the housing,*  
*wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis.*

Spearman '342 **fails** to disclose, teach or suggest “a hollow fiber bundle formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu\text{m}$  and an outer diameter of approximately 500  $\mu\text{m}$ , and being orientated in a direction of a predetermined axis.”

Spearman '342 discloses a hollow fiber membrane device for humidifying an oxygen enriched gas. Hollow fiber membrane device includes a shell within which a module of a plurality of hollow fibers, which allow water vapor to permeate either more oxygen gas or nitrogen gas, is disposed. The oxygen enriched gas to be humidified may flow through the insides of hollow fibers and the air may flow along the outsides of hollow fibers.

The inventors found that when the atmospheric air is used as a moisture source for humidifying an oxygen enriched gas, the above dimensions of the hollow fibers having an inner diameter of approximately 400  $\mu\text{m}$  and an outer diameter of approximately 500  $\mu\text{m}$  optimize the humidifying performance of the humidifying devices and comprising the feature, “a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7,” described in Applicant’s claim 1, is not disclose by Spearman '342.

Indeed, there is **no mention** of a hollow fiber bundle formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu\text{m}$  and an outer diameter of approximately 500  $\mu\text{m}$ , and being orientated in a direction of a predetermined axis in Spearman '342.

**Office Action Failed to Show That the Spearman '342 Discloses the Ratio of Cross-Sectional Areas from 0.1 to 0.7**

Spearman '342 fails to disclose, teach or suggest "*wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis.*"

The Examiner has stated in relation to claim 1 that "although not specifically addressed in the specification of Spearman '342, the ratio of cross-sectional areas based on Fig. 3 appears to be approximately 8/23, which is within the claimed range." However, neither Fig. 3 of Spearman '342 nor Spearman provisional Application shows the ratio of cross-sectional areas of approximately 8/23 or the ratio of cross-sectional areas from 0.1 to 0.7 of the present invention.

Moreover, Fig. 3 of Spearman is only a diagrammatic section of the fiber membrane device along the axis thereof, showing eight hollow fibers, each having an inner diameter of 1mm, disposed inside a shell having a diameter of 31 mm. Therefore, Fig. 3 does not show the actual number of the hollow fibers, and thus the ratio of 8/23 indicated by the Examiner does not correspond to the "ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis" described in Applicant's claim 1.

Clearly, the specification of Spearman '342 is completely **silent** on the ratio of cross-sectional areas.

There is a long standing tradition within U.S. patent practice that arguments based on the measurement of a drawing *are of little value absent any written description* in the specification of the quantitative values allegedly shown within the drawings. *In re Wright*, 193 USPQ 332, 335 (C.C.P.A. 1977). (Emphasis added.)

Apparently, the proportions shown in the drawing figure are merely the result of a draftsman's selection *rather than the embodiment of an intention to represent the device to scale*. *In re Ringel*, 36 USPQ 351, 353 (C.C.P.A. 1938). (Emphasis added.)

To reiterate, the specification of Spearman '342 is completely silent on the ratio of cross-sectional areas.

Drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes *if the specification is completely silent* on the issue. *Hockerson-Halberstadt Inc. v. Avia Group International Inc.*, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000). M.P.E.P. §2125 (proportions of features in a drawing are not evidence of actual proportions when drawings are not drawn to scale). (Emphasis added.)

The Examiner has stated that "the ratio of cross-sectional areas of 8/23 is considered as an obvious design choice." However, FIG. 4 and statements in the specification thereabout demonstrate that Applicant's claimed invention proved **the unexpected results** in providing effective humidify in an oxygen concentrated gas.

The Examiner further alleges that in order to qualify as unexpected results, the results cannot be merely superior or better but must be surprisingly or unexpectedly better than a person of ordinary skill in the art would expect. This is precisely the case here.

When looking at the Spearman '342 reference, one does not know what, if any, ratios of the air passage cross-sectional area is being used. Applicant has recited in claim 1 that the air passage cross-sectional area of 0.1 to 0.7 is to be employed to provide effective humidify in an oxygen concentrated gas. As is admitted by the Examiner, on page 4 of the Final Office Action, Spearman '342 does not specifically address the ratio of cross-sectional areas in the specification of Spearman '342. There is a long standing tradition within U.S. patent practice that arguments based

on the measurement of a drawing *are of little value absent any written description* in the specification of the quantitative values allegedly shown within the drawings.

Moreover, Applicant also demonstrates **the unexpected results** of the present invention in the Declaration attached hereto as Exhibit A (hereinafter referred to as the “Declaration A”). As described in the Declaration A, the humidifying device of the presently claimed invention can effectively humidify the gas with the damp air in atmospheric pressure; because the present invention has the following features (A) – (C):

Feature (A): Directing the gas to be humidified into the bores of hollow fibers.

Feature (B): Directing air through the space in the housing external of the hollow fibers by using a blowing means.

Feature (C): Setting the ration between the sum of cross-sectional areas of the hollow fibers and an air passage cross-sectional area within the range of 0.1 – 0.7.

Concretely speaking, in case of a humidifying device without feature (C) (Experiment 1 in the Declaration A), the humidifying device cannot humidify an oxygen concentrated gas in equal with relative humidity of a damp air in atmospheric pressure. In case of a humidifying device without features (A) and (B) (Experiment 2 in the Declaration A), the humidifying device cannot vanishingly humidify an oxygen concentrated gas. On the other hand, the humidifying device with feature (A), (B) and (C) of the present invention can effectively humidify an oxygen concentrated gas in equal with relative humidity of the damp air in atmospheric pressure, and is maintenance-free by using a blowing means of low noise and low power consumption type.

The Final Office Action further alleges that a person of ordinary skill in the art would choose Applicant’s air passage cross-sectional area within the range of 0.1 – 0.7 as the optimal ratio range for humidifying gas passing through a hollow fiber. The Final Office Action goes on to suggest that if the ratio is too great, there is a dearth of permeable surface area to optimally accommodate all of the oxygen molecules and if the ratio is to low, then an application of

Bernoulli's principle suggests that the oxygen molecules are traveling through the hollow fibers too quickly to absorb an optimal amount. This statement is not quite accurate.

While the above statement may be true, which is not admitted, having an air passage cross-sectional area within the range of 0.1 – 0.7 is not a simple matter of design choice. As stated above, when looking at the Spearman '342 reference, one does not know what, if any, ratios of the air passage cross-sectional area is being used. Applicant has recited in claim 1 that the air passage cross-sectional area of 0.1 to 0.7 is to be employed to provide effective humidify in an oxygen concentrated gas. As is admitted by the Examiner, on page 4 of the Final Office Action, Spearman '342 does not specifically address the ratio of cross-sectional areas in the specification of Spearman '342. Therefore, the specific ratios employed by the Applicant fall outside a simple matter of design choice or optimization.

Therefore, Applicant does not believe that the feature of the ratio of cross-sectional areas from 0.1 to 0.7 of the present invention is a design choice.

As such, there is **no mention** of wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis in Spearman '342.

Accordingly, Applicant respectfully requests that the rejection of claims 1-2 and 5 under 35 U.S.C. § 102(e) as being anticipated or, in the alternative, under § 103 (a) as obvious over Spearman '342 be withdrawn.

2. Claim 3 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Goel (U.S. Pub. No. 2004/0115489, hereinafter referred to as "Goel '489"). Applicant respectfully traverses this rejection.

Claim 3 depends from and thus incorporates the features of claim 1, which are neither disclosed nor suggested by Spearman '342, for the reasons stated above.

Goel '489 does not remedy the deficiencies of Spearman '342, as the various features recited above are also absent from Goel '489. For example, Applicant's claimed features of *"wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis,"* are neither disclosed nor suggested by Goel '489.

Goel '489 discloses a fuel cell, also referred to as a "fuel cell stack", operated in combination with a technically feasible and economically viable membrane based water and energy management system that improves the overall efficiency of the fuel cell system by facilitating efficient water and heat transfer between two predominantly gaseous streams in the fuel cell system providing continuous, long-term and maintenance free operation.

There is **no mention** of a hollow fiber bundle formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu$ m and an outer diameter of approximately 500  $\mu$ m, and being orientated in a direction of a predetermined axis in Goel '489.

There is also **no mention** of wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis in Goel '489.

Accordingly, Applicant respectfully requests that the rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Goel '489 be withdrawn.

3. Claim 4 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Daniell (U.S. Patent 6,050,260, hereinafter referred to as "Daniell '260").  
Applicant respectfully traverses this rejection.

Claim 4 depends from and thus incorporates the features of claim 1, which are neither disclosed nor suggested by Spearman '342, for the reasons stated above.

Daniell '260 does not remedy the deficiencies of Spearman '342, as the various features recited above are also absent from Daniell '260. For example, Applicant's claimed features of *"wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis,"* are neither disclosed nor suggested by Daniell '260.

Daniell '260 discloses an apparatus and method of treating OSA (Obstructive Sleep Apnea) are disclosed wherein a Positive Airway Pressure device is utilized to provide a gases supply which is then passed through a humidifier. As the amount of water vapor generated by the humidifier is very low at start up the pressure of gases supplied by the apparatus are controlled so that the humidity of the gases supplied to a patient are always at the maximum of the capability of the humidifier to humidify that air flow.

There is no mention of a hollow fiber bundle formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu$ m and an outer diameter of approximately 500  $\mu$ m, and being orientated in a direction of a predetermined axis in Daniell '260.

There is no mention of wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis in Goel '489.

Accordingly, Applicant respectfully requests that the rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Daniell '260 be withdrawn.



4. Claim 6 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Izumi et al. (U.S. Patent 4,453,952, hereinafter referred to as "Izumi '952"). Applicant respectfully traverses this rejection.

Claim 6 depends from and thus incorporates the features of claim 1, which are neither disclosed nor suggested by Spearman '342, for the reasons stated above.

Izumi '952 does not remedy the deficiencies of Spearman '342, as the various features recited above are also absent from Izumi '952. For example, Applicant's claimed features of *"wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis,"* are neither disclosed nor suggested by Izumi '952.

Izumi '952 discloses an oxygen adsorbent for adsorbing oxygen from a mixed gas containing oxygen which comprises Na-A type zeolite containing iron with a valence of at least 2 or Na-A type zeolite in which a portion of Na is substituted with K and also contains iron. A process for the separation of oxygen from a mixed gas containing it by contacting the gas with the oxygen adsorbent at a low temperature to adsorb oxygen selectively.

There is **no mention** of a hollow fiber bundle formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu\text{m}$  and an outer diameter of approximately 500  $\mu\text{m}$ , and being orientated in a direction of a predetermined axis in Izumi '952.

There is **no mention** of wherein a ratio between a sum of cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and an air passage cross-sectional area, is set within a range from 0.1 to 0.7, the air passage cross-sectional area being obtained by subtracting the sum of cross-sectional areas of the hollow fibers from a cross-sectional area of the space of the housing taken along a plane perpendicular to the axis in Goel '489.

Accordingly, Applicant respectfully requests that the rejection of claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Izumi '952 be withdrawn.

5. Claims 7, 9 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez et al. (U.S. Patent 6,582,955, hereinafter referred to as "Martinez '955"). Applicant respectfully traverses this rejection.

Claim 7 recites:

*A humidifying device for humidifying a gas, with the water vapor contained in air, comprising:*

*a plurality of hollow fiber bundles respectively formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu$ m and an outer diameter of approximately 500  $\mu$ m, and being orientated in a direction of a predetermined axis,*

*wherein each of the hollow fiber bundles includes 50 to 1,000 of hollow fibers;*

*a housing having an accommodating space for accommodating the plurality of hollow fiber bundles, and having an introduction port for the gas to be humidified, communicating to bores of the hollow fibers of the respective hollow fiber bundles, a discharging port for the gas to be humidified, communicating to bores of the hollow fibers of the respective hollow fiber bundles, an air inlet communicating to a space in the housing external of the hollow fibers to introduce atmospheric air, and an air exit communicating to the space in the housing external of the hollow fibers; and*

*blowing means arranged at the air inlet of the housing for introducing the atmospheric air into the housing.*

Spearman '342 in view of Martinez '955 fail to disclose, teach, or suggest "a plurality of hollow fiber bundles respectively formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu$ m and an outer diameter of approximately 500  $\mu$ m, and being orientated in a direction of a predetermined axis, wherein each of the hollow fiber bundles includes 50 to 1,000 of hollow fibers; a housing having an

*accommodating space for accommodating the plurality of hollow fiber bundles, and having an introduction port for the gas to be humidified, communicating to bores of the hollow fibers of the respective hollow fiber bundles, a discharging port for the gas to be humidified, communicating to bores of the hollow fibers of the respective hollow fiber bundles, an air inlet communicating to a space in the housing external of the hollow fibers to introduce atmospheric air, and an air exit communicating to the space in the housing external of the hollow fibers.”*

Foremost, the inventors found that when the atmospheric air is used as a moisture source for humidifying an oxygen enriched gas, the above dimensions of the hollow fibers having an inner diameter of approximately 400  $\mu\text{m}$  and an outer diameter of approximately 500  $\mu\text{m}$  optimize the humidifying performance of the humidifying devices and comprising the feature, “a plurality of hollow fiber bundles respectively formed by bundling a plurality of hollow fibers,” described in Applicant’s claim 7 are not disclosed by Spearman ‘342 in view of Martinez ‘955.

Moreover, the Examiner has stated in relation to claim 7 that “Martinez teaches a bioreactor using a plurality of hollow fiber bundles (see column 2, lines 60-65).” Column 2, lines 60-65 of Martinez describes that “In the configuration using hollow fibers, the bioreactor is comprised of a plurality of two hollow fiber bundles, each said hollow fiber bundle interdependent of the other whereby *each individual hollow fiber*, comprising the plurality of hollow fibers in One bundle, *is disposed coaxially inside each hollow fiber of the other hollow fiber bundle.*” Therefore, Martinez ‘955 discloses only a single hollow fiber bundle composed of a plurality of “dual tubes,” as shown in Fig. 5 of Martinez ‘955. This justifiably means that there is a space between outside fiber and inner fiber in a single hollow fiber bundle, but the space structurally does not communicate to a space in the housing external of the coaxial pairs of hollow fiber as shown in Fig. 28 of Martinez ‘955.

On the other hand, a single hollow fiber bundle of “a plurality of hollow fiber bundles” in the present invention is composed of a plurality of hollow fibers being orientated in a direction of predetermined axis in parallel, as shown in Figure 5 and 6 of the specification. Therefore, there is a space between each hollow fiber in the single hollow fiber bundle, and the space communicates to a space in the housing external of the hollow fiber bundle.

Moreover, with reference to Fig. 3 of Martinez '955, each of the hollow fiber bundles comprises a single coaxial dual tube composed of outside fiber 18 and inner hollow fiber membrane 19 coaxially positioned in outside fiber 18. Applicant does not believe that the configuration of Martinez '955 teaches the "plurality of hollow fiber bundles respectively formed by bundling a plurality of hollow fibers," described in Applicant's claim 7. Further, Martinez '955 describes a bioreactor used as a cell culture device, which does not belong to the field of humidifying an oxygen enriched gas with the water vapor contained in the atmospheric air. Therefore, Applicant does not believe that there is motivation to combine Martinez '955 with Spearman '342.

Consequently, Applicant does not believe that neither Martinez '955 nor Spearman '342 disclose or suggests the feature, i.e., *"a plurality of hollow fiber bundles respectively formed by bundling a plurality of hollow fibers permeable by water vapor, the hollow fibers having an inner diameter of approximately 400  $\mu$ m and an outer diameter of approximately 500  $\mu$ m, and being orientated in a direction of a predetermined axis, wherein each of the hollow fiber bundles includes 50 to 1,000 of hollow fibers"* and *"a housing having an accommodating space for accommodating the plurality of hollow fiber bundles, and having an introduction port for the gas to be humidified, communicating to bores of the hollow fibers of the respective hollow fiber bundles, a discharging port for the gas to be humidified, communicating to bores of the hollow fibers of the respective hollow fiber bundles, an air inlet communicating to a space in the housing external of the hollow fibers to introduce atmospheric air, and an air exit communicating to the space in the housing external of the hollow fibers."*

Further, Applicant also demonstrates **the unexpected results** of the present invention in the Declaration attached hereto as Exhibit B (hereinafter referred to as the "Declaration B"). As described in the Declaration B, the experimental results demonstrate that a device including a plurality of hollow fiber bundles (Experiment 1 of the Declaration B) can **unexpectedly** humidify an oxygen concentrated gas more than a device including a single hollow fiber bundle having the same number of hollow fibers (Experiment 2 of the Declaration B). Needless to say, Martinez '955 structurally cannot exhibit such **unexpected results** as those exhibited in the present invention.

Therefore, Applicant does not believe that claim 7 is obvious from the disclosures of the cited references.

Accordingly, Applicant respectfully requests that the rejection of claims 7, 9 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 be withdrawn.

6. Claim 8 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 and further in view of Goel '489. Applicant respectfully traverses this rejection.

Neither Martinez '955 nor Goel '489 remedy the deficiencies of Spearman '342, for reasons cited above and as the various features claimed above are also absent from Martinez '955 or Goel '489.

Accordingly, Applicant respectfully requests that the rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 and further in view of Goel '489 be withdrawn.

7. Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 and further in view of Daniell '260. Applicant respectfully traverses this rejection.

Neither Martinez '955 nor Daniell '260 remedy the deficiencies of Spearman '342, for reasons cited above and as the various features claimed above are also absent from Martinez '955 or Daniell '260.

Accordingly, Applicant respectfully requests that the rejection of claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 and further in view of Daniell '260 be withdrawn.

8. Claim 12 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 and further in view of Izumi '952. Applicant respectfully traverses this rejection.

Neither Martinez '955 nor Izumi '952 remedy the deficiencies of Spearman '342, for reasons cited above and as the various features claimed above are also absent from Martinez '955 or Izumi '952.

Accordingly, Applicant respectfully requests that the rejection of claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Spearman '342 in view of Martinez '955 and further in view of Izumi '952 be withdrawn.

## **II. Conclusion**

In view of the above amendment, applicant believes the pending application is in condition for allowance.

This response is believed to be a complete response to the Office Action. However, Applicant reserves the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicant expressly does not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

## **Extensions of time**

Please treat any concurrent or future reply, requiring a petition for an extension of time under 37 C.F.R. §1.136, as incorporating a petition for extension of time for the appropriate length of time.

The Commissioner is hereby authorized to charge all required fees, fees under 37 C.F.R. §1.17, or all required extension of time fees.

**Fees-general authorization**

The Commissioner is hereby authorized to charge any deficiency in fees filed, asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm).

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Dated: April 13, 2011

Respectfully submitted,

By 

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